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[54] **CONTINUOUS PROCESS FOR THE SEPARATION OF BIOLOGIC COMPONENTS FROM HETEROGENEOUS CELL POPULATIONS**

[75] Inventors: **William C. Lake**, Laguna Niguel, Calif.; **Richard Giesler**, Deerfield, Ill.; **Dennis Van Epps**, Cary, Ill.; **John R. Chapman**, Lake Villa, Ill.; **Jeffrey A. Martinson**, Mundelein, Ill.; **Dale R. Ellis**, Wonder Lake, Ill.; **Frederick Aono**, Arlington Heights, Ill.; **Daniel F. Bischof**, McHenry, Ill.

[73] Assignee: **Baxter International Inc.**, Deerfield, Ill.

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Related U.S. Application Data

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[51] **Int. Cl.**[6] **A01N 1/02**; C12Q 1/68; C12N 1/02

[52] **U.S. Cl.** **435/2**; 435/6; 435/261; 436/518; 436/523; 436/532; 424/529

[58] **Field of Search** 435/2, 6, 261; 436/518, 523, 532; 424/529

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Primary Examiner—James C. Housel
Assistant Examiner—Jennifer Graser
Attorney, Agent, or Firm—Andrew G. Kolomayets; Denise M. Serewicz; Bradford R. L. Price

[57] **ABSTRACT**

A method combining the techniques of immunoaffinity separation and continuous flow centrifugal separation is provided for selective separation of a nucleated heterogeneous cell population from a heterogeneous cell mixture. The heterogeneous cell mixture is intimately contacted to promote binding thereto by particles having attached a substance that actively binds to a specific desired type of cell out of the cell mixture. The particles are selected so that the sedimentation velocity of the particle/cell conjugate differs sufficiently from those of other cells in the cell mixture to allow its separation by means of a continuous flow cell separator. The method rapidly processes large volumes of cell mixture with the high accuracy expected of immunoaffinity separation and can be used to separate, for example, various types of leukocytes from whole blood, bone marrow concentrate, or a peripheral blood stem cell concentrate; or precursors of lymphokine activated killer cells, tumor infiltrating lymphocyte cells, or activated killer monocytes from lymphocyte or monocyte cell concentrates or from a tissue cell preparation.

61 Claims, 2 Drawing Sheets